CLAIMS

What is claimed is:

1. Standard attachment fittings for wire rope and chain that are enhanced to also perform load weighing functions in lifting/support or pulling assembly applications, each of the said attachment fittings comprising:

a standard attachment fitting body/assembly such as a shackle assembly, eye bolt, master link or hook assembly;

a strain gauge element configured as a Wheatstone bridge and affixed appropriately to said fitting body to perform accurate load weight measurement functions;

an optional electrical/electronic wiring hook-up to connect the said strain gauge element to a stretchable cable with end fittings and a readout display.

2. Standard attachment fittings according to Claim **1** wherein original fitting application functionality is maintained in addition to fitting enhancement to perform weighing functions.

3. Standard attachment fittings according to Claim **1** wherein the requirement for a separate weigh scale that is also required to lift/support or pull and safety related weigh scale load performance testing is eliminated.

4. Standard attachment fittings according to Claims **1** or **3** wherein the requirement for additional attachment fittings to connect a separate weigh scale is eliminated.

5. Standard attachment fittings according to Claims **1, 3** or **4** wherein the reduction of components that are required to lift/support or pull enhances simplicity, reduces cost and improves safety.

6. Standard attachment fittings according to Claim **1** wherein their unmodified standard shape produces focused linear strain at determinable positions on the fitting bodies when properly loaded in tension or compression.

7. Standard attachment fittings according to Claims **1** or **6** wherein affixing a strain gauge element to any one of the said determinable positions on a fitting body will allow accurate load weight measurement.

8. Standard attachment fittings according to Claims **1, 6** or **7** wherein the need for a "thin section" in the body of the load sensor or fitting in order to focus load stress and achieve accurate load weight reading is eliminated.

9. Standard attachment fittings according to Claims **1** or **8** wherein elimination of the need for a "thin section" preserves load sensor or fitting structural integrity and assembly safety.

10. Standard attachment fittings according to Claim **1** wherein retained fitting assembly overload readings warn the user of potential permanent fitting distortion and subsequent potential failure thereby enhancing safety.

11. Standard attachment fittings according to Claims **1** or **5** wherein the reduction of the required number of assembly components that lift or support the load increase the clearance between the load and the floor in overhead lifting applications.

12. Standard attachment fittings according to Claim **1** wherein use of a wireless remote system to transmit load weight readings to a readout display is an alternative option to the use of wiring for this purpose.